

### AMENDMENTS TO THE CLAIMS

1. (Currently amended) A process for the preparation of a composition comprising a mixture of linolenic acids, said linolenic acids being 9cis,11trans,15cis-octadecatrienoic acid and 9cis,13trans,15cis-octadecatrienoic acid ~~and having a ratio of 1:1 w:w, a concentration of said mixture varying between 30% and 90% by weight relative to the weight of the composition,~~ said process comprising the steps of:

- ~~providing a solvent of water;~~
- blending with the solvent in the presence of a base one or a mixture of vegetable oils with various concentrations of linolenic acid or partial glycerides of such oils or partially purified and/or concentrated isomers to produce a reaction mixture with a base and in the presence of water; and
- recovering from the reaction mixture the composition comprising the mixture of resulting conjugated linolenic acids.

2. (Currently amended) The process according to claim 1, wherein the step of blending is performed at a temperature ranging from 160°C to 200°C.

3. (Previously presented) The process according to claim 2, wherein the temperature is 180°C.

4. (Currently amended) The process according to claim 1, wherein said process proceeds for a period varying between 0.5 hour to 4 hours.

5. (Previously presented) The process according to claim 4, wherein the period is 2 hours.

6. (Previously presented) The process of claim 1, wherein the vegetable oil comprises linseed oil, *Plukenetia volubilis* oil, borage oil or a mixture thereof.

7. (Previously presented) The process of claim 1, wherein the base is selected from a group consisting of sodium hydroxide, sodium alkoxylate, sodium metal, potassium hydroxide, potassium alkoxylate and potassium metal.

8. (Previously presented) The process according to claim 7, wherein the base is potassium hydroxide or sodium hydroxide.

9. (Currently amended) A composition comprising a mixture of linolenic acids, said linolenic acids being 9cis,11trans,15cis-octadecatrienoic acid and 9cis,13trans,15cis-

octadecatrienoic acid, wherein said linolenic acids are present in a ratio of 1:1 w:w and said mixture varying between 30% and 90% by weight relative to the weight of the composition, wherein the composition is prepared by

providing a solvent of water or polyol;

blending with the solvent in the presence of a strong base, one or a mixture of vegetable oil having various concentrations of linolenic acid or partial glycerides of such oils or partially purified and/or concentrated isomers, to produce a reaction mixture at a temperature of 160°C to 200°C; and

recovering from the reaction mixture the composition comprising the mixture of linolenic acids.

10. (Previously presented) The composition according to claim 9, wherein it comprises at least 40% by weight of said mixture, and less than 0.5% by weight of 11,13-cyclic by-product.

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Previously presented) A method for inducing apoptosis of mammalian solid neoplastic cancer cells, comprising contacting said cells with a therapeutically effective amount of the composition according to claim 9.

16. (Cancelled)

17. (Previously presented) The method of claim 15, wherein the mammalian solid neoplastic cancer cells are breast cancer cells.

18. (Previously presented) The method of Claim 17, wherein said breast cancer cells are human breast cancer cells.

19. (Previously presented) The method of Claim 18, wherein the human breast cancer cells are selected from the group consisting of estrogen positive and estrogen negative breast cancer cells.

20. (Previously presented) The method of Claim 19, wherein the breast cancer cells are from cells lines MB-231 or MCF-7.

21. (Previously presented) The method of Claim 20, wherein the step of contacting the cells with the composition is performed *in vitro*.

22. (New) The process of claim 1, wherein before the step of blending, the base is mixed with the solvent of water.

23. (New) The process of claim 8, wherein the base and the solvent of water are used in a relative proportion by weight between 4.2:100 and 8:100.

24. (New) The process of claim 23, wherein the vegetable oil is linseed oil.

25. (New) The process of claim 24, wherein the linseed oil is used in a relative proportion by weight to the base and solvent between 7.8:81.2 and 23:77.

26. (New) The process of claim 24, further comprising, after producing the reaction mixture, the step of: cooling the reaction mixture to 60°C and adding a stoichiometric amount of  $\text{CaCl}_2$  to convert sodium soaps into calcium soaps.

27. (New) The process of claim 26, further comprising, after producing the calcium soaps, the step of: filtering the mixture and washing with water.

28. (New) The process of claim 27, further comprising, after filtering, the step of: adding a stoichiometric amount of  $\text{H}_2\text{SO}_4$  in methanol to produce  $\text{CaSO}_4$  precipitate at a pH of 3 to produce a free fatty acid solution.

29. (New) The process of claim 28, further comprising, after producing the free fatty acid solution, the step of: subjecting the solution to repetitive urea crystallizations.

30. (New) The process of claim 29, further comprising, after subjecting the composition to repetitive urea crystallizations, the step of: subjecting the composition to argentation liquid chromatography.

31. (New) The process of claim 1, wherein the composition is recovered to comprise the mixture of 9cis,13trans,15cis-octadecatrienoic acid and 9cis,11trans,15cis-octadecatrienoic

**Application No.: 10/567,419**  
**Filing Date: August 21, 2006**

acid in a ratio of 1:1 w/w, a concentration of said mixture varying between 30% and 90% by weight relative to the weight of the composition.